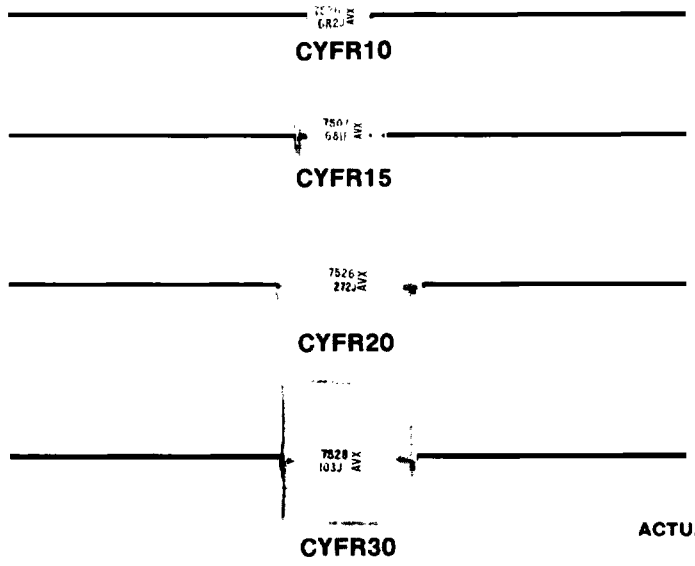
CYFR 10,15, 20, 30 (HIGH RELIABILITY)

APPLICATIONS:

AVX style CYFR high reliability glass capacitors have failure rates among the lowest available. Outstanding stability, reliability and electrical performance are provided by the fused monolithic construction, which is virtually immune to environmental stresses. These capacitors meet or exceed all requirements of AVX specifications J-950 and J-951, which combine the most exacting features of many military specifications and substantially exceed most.



PERFORMANCE CHARACTERISTICS

Tolerance — Available tolerances for each value of capacitance are shown in the Ordering Information table. For codes, refer to the Part Numbers paragraph.

Temperature Coefficient — +140 ±25 ppm/°C at 100 kHz. TC will track and retrace to within ±5 ppm. Capacitance drift is less than 0.1% or 0.1 pF, whichever is greater.

Voltage Coefficient — zero.

Losses — Extremely low, and remain relatively low at elevated temperatures and high frequencies. Dissipation factor is less than 0.001 at 1 kHz and 25°C.

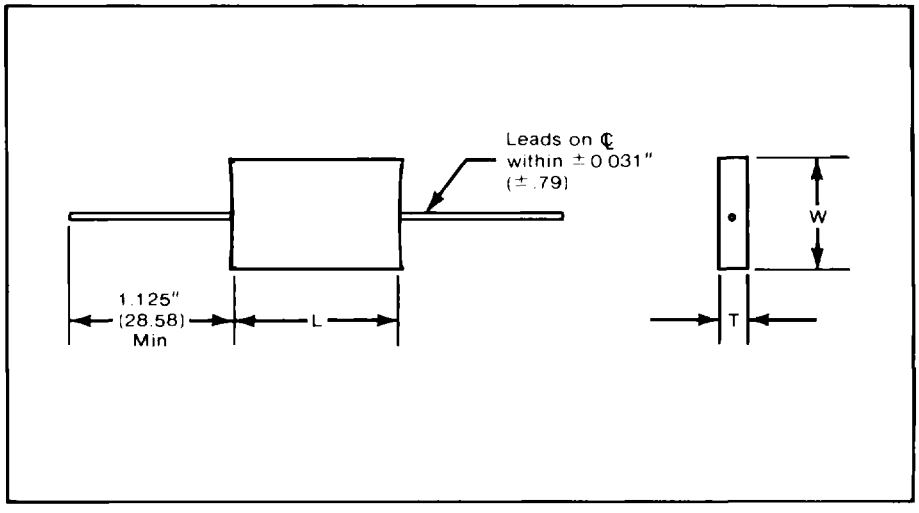
Life — After 2,000 hours at 125°C with 150% of rated voltage applied, capacitance change is less than 0.5% or 0.5 pF, dissipation factor is less than 0.0015, and insulation resistance is greater than 500,000 megohms.

Insulation Resistance — Greater than 500,000 megohms at 25°C; greater than 10,000 megohms at 125°C.

Voltage/Temperature Ratings — Voltage ratings are shown in the ordering information table. The operating temperature range is −55°C to +125°C with no derating required.

Moisture Resistance — Meets or exceeds all requirements of J-951 and MIL-STD-202, Method 106 for 50 cycles.

Radiation Resistance — The unique materials and construction techniques involved with glass capacitors make them ideal for use in radiation environments. After a total dose of nearly 10^8 rads (H_2O) AVX glass capacitors exhibit only a minor change in capacitance (≤.5%) and an 8% change in dissipation factor. Furthermore, glass capacitors can operate in fast neutron flux environments of 10^{15} N $cm^{-2}sec^{-1}$ and experience little or no damage in component parameters.



Dimensions — Inches (Millimeters)

Case Size	L	W	T	Lead Dia. +.004 (+0.1) −.001 (−0.03)	Weight (Grams)
CYFR10	.344 ± .047 (8.74 ± 1.19)	.172 ± .031 (4.37 ± .79)	.078 ± .031 (1.98 ± .79)	.020 (.51)	.25 - .50
CYFR15	.469 ± .047 (11.91 ± 1.19)	.266 ± .031 (6.76 ± .79)	.109 ± .047 (2.77 ± 1.19)	.020 (.51)	.75 - 1.25
CYFR20	.734 ± .062 (18.64 ± 1.57)	.422 ± .047 (10.72 ± 1.19)	.141 ± .047 (3.58 ± 1.19)	.025 (.63)	2.50 - 4.00
CYFR30	.766 ± .062 (19.46 ± 1.57)	.750 ± .078 (19.05 ± 1.98)	.141 ± .047 (3.58 ± 1.19)	.025 (.63)	5.00 - 7.00

NOTE: Leads are solderable and weldable gold-plated Dumet

Additional performance details are given in the AVX "Performance Characteristics of Multilayer Glass Dielectric Capacitors" technical paper.

Glass Capacitors

AVX

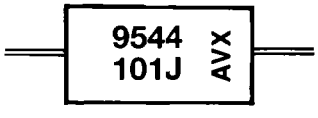
Part Numbers and Ordering Information

Capacitance Value (pF)	AVX Part Number	DC Working Voltage	Tolerances Available
	STANDARD VALUES CYFR10		
0.5	CYFR10*0R5**	500	C
1.0	CYFR10__1R0__	500	C
1.5	CYFR10__1R5__	500	C
2.2	CYFR10__2R2__	500	C,D
2.7	CYFR10__2R7__	500	C
3.0	CYFR10__3R0__	500	C,D
3.3	CYFR10__3R3__	500	C
3.6	CYFR10__3R6__	500	C,D
3.9	CYFR10__3R9__	500	C
4.3	CYFR10__4R3__	500	C,D
4.7	CYFR10__4R7__	500	C
5.1	CYFR10__5R1__	500	C
5.6	CYFR10__5R6__	500	C
6.2	CYFR10__6R2__	500	C,J
6.8	CYFR10__6R8__	500	C,J
7.5	CYFR10__7R5__	500	C,J
8.2	CYFR10__8R2__	500	C,J
9.1	CYFR10__9R1__	500	C,J
10	CYFR10__100__	500	C,J
11	CYFR10__110__	500	C,J
12	CYFR10__120__	500	C,J
13	CYFR10__130__	500	G,J
15	CYFR10__150__	500	G,J
16	CYFR10__160__	500	G,J
18	CYFR10__180__	500	G,J
20	CYFR10__200__	500	G,J
22	CYFR10__220__	500	G,J
24	CYFR10__240__	500	G,J
27	CYFR10__270__	500	F,G,J
30	CYFR10__300__	500	F,G,J
33	CYFR10__330__	500	F,G,J
36	CYFR10__360__	500	F,G,J
39	CYFR10__390__	500	F,G,J
43	CYFR10__430__	500	F,G,J
47	CYFR10__470__	500	F,G,J
51	CYFR10__510__	500	F,G,J
56	CYFR10__560__	500	F,G,J
62	CYFR10__620__	500	F,G,J
68	CYFR10__680__	500	F,G,J
75	CYFR10__750__	500	F,G,J
82	CYFR10__820__	500	F,G,J
91	CYFR10__910__	500	F,G,J
100	CYFR10__101__	500	F,G,J
110	CYFR10__111__	500	F,G,J
120	CYFR10__121__	500	F,G,J
130	CYFR10__131__	500	F,G,J
150	CYFR10__151__	500	F,G,J
160	CYFR10__161__	300	F,G,J
180	CYFR10__181__	300	F,G,J
200	CYFR10__201__	300	F,G,J
220	CYFR10__221__	300	F,G,J
240	CYFR10__241__	300	F,G,J
	STANDARD VALUES CYFR15		
160	CYFR15*161**	500	F,G,J
180	CYFR15__181__	500	F,G,J
200	CYFR15__201__	500	F,G,J
220	CYFR15__221__	500	F,G,J

Capacitance Value (pF)	AVX Part Number	DC Working Voltage	Tolerances Available
	STANDARD VALUES CYFR15, con't.		
240	CYFR15*241**	500	F,G,J
270	CYFR15__271__	500	F,G,J
300	CYFR15__301__	500	F,G,J
330	CYFR15__331__	500	F,G,J
360	CYFR15__361__	500	F,G,J
390	CYFR15__391__	500	F,G,J
430	CYFR15__431__	500	F,G,J
470	CYFR15__471__	500	F,G,J
510	CYFR15__511__	500	F,G,J
560	CYFR15__561__	300	F,G,J
620	CYFR15__621__	300	F,G,J
680	CYFR15__681__	300	F,G,J
750	CYFR15__751__	300	F,G,J
820	CYFR15__821__	300	F,G,J
910	CYFR15__911__	300	F,G,J
1000	CYFR15__102__	300	F,G,J
1100	CYFR15__112__	300	F,G,J
1200	CYFR15__122__	300	F,G,J
	STANDARD VALUES CYFR20		
560	CYFR20*561**	500	F,G,J
620	CYFR20__621__	500	F,G,J
680	CYFR20__681__	500	F,G,J
750	CYFR20__751__	500	F,G,J
820	CYFR20__821__	500	F,G,J
910	CYFR20__911__	500	F,G,J
1000	CYFR20__102__	500	F,G,J
1100	CYFR20__112__	500	F,G,J
1200	CYFR20__122__	500	F,G,J
1300	CYFR20__132__	500	F,G,J
1500	CYFR20__152__	500	F,G,J
1600	CYFR20__162__	500	F,G,J
1800	CYFR20__182__	500	F,G,J
2000	CYFR20__202__	500	F,G,J
2200	CYFR20__222__	500	F,G,J
2400	CYFR20__242__	500	F,G,J
2700	CYFR20__272__	500	F,G,J
3000	CYFR20__302__	500	F,G,J
3300	CYFR20__332__	500	F,G,J
3600	CYFR20__362__	300	F,G,J
3900	CYFR20__392__	300	F,G,J
4300	CYFR20__432__	300	F,G,J
4700	CYFR20__472__	300	F,G,J
5100	CYFR20__512__	300	F,G,J
	STANDARD VALUES CYFR30		
3600	CYFR30*362**	500	F,G,J
3900	CYFR30__392__	500	F,G,J
4300	CYFR30__432__	500	F,G,J
4700	CYFR30__472__	500	F,G,J
5100	CYFR30__512__	500	F,G,J
5600	CYFR30__562__	500	F,G,J
6200	CYFR30__622__	500	F,G,J
6800	CYFR30__682__	300	F,G,J
7500	CYFR30__752__	300	F,G,J
8200	CYFR30__822__	300	F,G,J
9100	CYFR30__912__	300	F,G,J
10000	CYFR30__103__	300	F,G,J

*Add S or G for lead finish **Add letter for tolerance code

PART MARKING



95— Year
44— Lot Code
101— Capacitance, Coded in pF
J— Tolerance
AVX— AVX Corporation

PART NUMBER EXPLANATION

CYFR 10 G 101 J A

- CYFR: High Reliability Glass Capacitor
- 10: Case Size 10, 15, 20, 30
- G: Lead Finish S = Solder Coated Dumet; G = Gold Plated Dumet (50 μinch minimum)
- 101: Capacitance, Coded in pF (See A)
- J: Capacitance Tolerance (See B)
- A: Test Level A = J-950 Specification; No designator = J-951 Specification

A. Capacitance Code is expressed in picofarads (pF). The first two digits represent significant figures and the third digit specifies the number of zeros to follow: i.e. 561 indicates 560 pF. For values below 10 pF, R = decimal point: i.e. 1R5 indicates 1.5 pF.

B. Tolerance Code:
C = ± .25 pF
D = ± .50 pF
F = ± 1%
G = ± 2%
J = ± 5%